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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/342,768	06/29/1999	SCOTT BERMINGHAM DOYLE	17286	7075

7590

08/11/2005

THE WHITAKER CORPORATION
4550 NEW LINDEN HILL ROAD
SUITE 450
WILMINGTON, DE 19808

EXAMINER

NGUYEN, THUAN T

ART UNIT

PAPER NUMBER

2685

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/342,768	Applicant(s) DOYLE ET AL.	
	Examiner THUAN T. NGUYEN	Art Unit 2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US Patent 4,249,181) in view of Blasing et al. (U.S. Patent 6,052,582).

Regarding claim 1, Lee discloses a system "having comprising an antenna for transmitting a signal of reused frequency within a specified range from the antenna, the antenna having multiple radiating antenna elements provided with the signal, the signal provided to each of the antenna elements being adjusted in phase and in amplitude across the radiating elements to mitigate radiation above horizon, and the signal provided to each of the antenna elements being adjusted in phase and in amplitude to decrease attenuation in radiated power with distance from the antenna" (Figs. 2-3 & 6, and col. 4/line 44 to col. 5/line 42 for a technique of tilting the antenna and antenna phased arrays are adjusted in amplitude and phase as gain can be increased or decreased to mitigate radiation above the horizon). However, Lee does not disclose that this

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technique is for use in a LMDS system; however, Lee suggests that to use in point-to-point radio transmission system (col. 1/lines 23-63). In addition, Blasing teaches a LMDS system having similar technique in providing antenna transmission patterns (see Fig. 19, col. 13/line 64 to col. 14/line 7 for LMDS; col. 5/lines 3-35 for the advantage of re-use of frequency within the Blasing's system as further noted in col. 16/line 62 to col. 17/line 32 for LMDS; and Fig. 46 /items 376 & 396 for variable attenuators and items 378, 382, 398, 404 for phase shifters for amplitude and phase adjusting of radiating antenna elements; Figs. 2, 4, 5, 43B and col. 8/lines 33-56 for mitigating radiation above horizon of the signal provided to each of the radiating elements of the antenna; and col. 22/lines 20-53 for sidelobe levels referred to attenuation in radiated power with distance away from the antenna as some excess power is unnecessary). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lee's antenna tilting technique in applying to Blasing's LMDS system for achieving the LMDS system with the antenna elements being adjusted in phase and amplitude to decrease the attenuation in radiated power with distance from the antenna as desired.

As for claim 2, in further view of claim 1 above, Blasing further suggests the step of "each of the antenna elements being adjusted in phase and amplitude of signal across the antenna elements to mitigate nulls between lobes of combined radiated signals collectively from the antenna elements", i.e., the maximum and minimum power level is maintained by implementing the low sidelobe levels in adjacent sectors to avoid unwanted signals for the shaped beam antenna (see col. 22/lines 20-53).

With respect to claim 3, in further view of claim 1 above, Blasing further discloses "each of the antenna elements being adjusted in phase and in amplitude of signal across the antenna

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elements to reduce excess signal power at near range”, i.e., an excess power output is reduced at near range or at adjacent sectors by eliminating unwanted energy from using low sidelobe antennas (see col. 22/lines 20-53 as sidelobe is maintained for mitigating interference at a reduced level from 3dB reduced to 1 dB).

As for claims 4-6, a corresponding method for use in the disclosed system is rejected for the reasons given in the scope of the system claims 1-3 as already disclosed above.

Conclusion

4. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9306, (for Technology Center 2600 only)

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Thuan Nguyen whose telephone number is (571) 272-7895. The examiner can normally be reached on Monday-Friday from 9:30 AM to 7:00 PM, with alternate Fridays off.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Tony T. Nguyen', with a stylized flourish at the end.

**TONY T. NGUYEN
PATENT EXAMINER**

Tony T. Nguyen
Art Unit 2685
August 1, 2005